

ELECTRONIC SENSOR WITH SIGNAL CONDITIONING**ABSTRACT**

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A method for extracting components from signals in an electronic sensor (50) having a sensing element (52). The sensing element (52) generates a first signal (60) and a second signal (62). The method comprises the steps of: receiving the first signal (60) from the sensing element (52), the first signal (60) having a frequency at an event; sampling the second signal (62) from the sensing element (52) based on the frequency of the event, the second signal (62) having a plurality of components, one of the plurality of components being a first component of interest (112, 114); generating a synchronized second signal (100) in a time domain, the second signal (62) having the plurality of components; generating complex data (110) in a frequency domain from the synchronized second signal (100) in the time domain; determining the first component of interest (112, 114) from the complex data (110); and normalizing the first component of interest (112, 114) using amplitude information from the first signal (60).